REMARKS

Reconsideration and withdrawal of the rejections set forth in the Office Action dated March 31, 2005 are respectfully requested.

I.   Rejections under 35 U.S.C. §102

Claims 19-26, 28 and 29 stand rejected under 35 U.S.C. 102(e) as anticipated by King *et al.* (U.S. Patent No. 5,633,724).

This rejection of these claims is respectfully traversed in view of the arguments below. A summary of the present invention and of the cited King *et al.* document are provided in Applicant's response submitted May 17, 2004.

A. Analysis

The standard for lack of novelty, that is, for anticipation, is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. M.P.E.P. § 2131.

Claim 19 recites an apparatus having, inter alia, the following element:

> a discriminator means for discriminating PREs with a selected spectral signature from other light-scattering entities in the computer image, based on a comparison of a selected spectral characteristic of PREs and other light-scattering entities in the field determined over said different spectral wavelengths.

With respect to this element, the Examiner asserts that the King *et al.* reference discloses an apparatus comprising "discriminator means (e.g., video camera, 208a, Col. 6, lines 13-20) for discriminating PREs with a selected spectral signature from other light-scattering entities in the computer image, based on a comparison of a selected spectral characteristic of PREs and other light-scattering entities in the field determined over said spectral wavelengths" (Office Action, sentence bridging pages 3-4).

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However, King *et al.* has no teaching related to comparing images from different light-scattering entities. A video camera, by itself, is unable to make a comparison of a selected spectral characteristic of PREs and other light-scattering entities in the field. Furthermore, King *et al.* provides no teaching related to the processing of the image data that would suggest a comparison of selected spectral characteristics of PREs and other light-scattering entities in the field. As discussed in Applicants' previous response, the apparatus in King *et al.* merely includes a computer (element 122, Col. 5, lines 57-60) "connected to the detection system for electronically collecting and analyzing the data generated by the detection system." Also as noted in the previous response, it is well-established in the case law that the mere disclosure in the prior art of a computer does not anticipate a computer for carrying out a specified function if the prior art does not also recognize that specified function (see, for example, *In re Alappat*, ,31 USPQ2d 1545 (Fed Cir. 1994). There is no teaching in King *et al.* that the computer therein is designed for discriminating PREs from other light-scattering entities in the computer image based on a comparison of selected spectral characteristics of PREs and other light-scattering entities in the field, nor is there any suggestion in King of carrying out that function by any means, whether or not by computer.

Thus, since King *et al.* does not teach this element, neither claim 19, nor any of claims 20-26, 28, and 29 dependent thereon can be anticipated by the King reference. Withdrawal of the rejection is therefore respectfully requested. In addition, and as an independent basis for patentability over King with respect to dependent claims 20, 26, 28, and 29, these claims includes separate limitations that are not disclosed in the prior art, for the reasons discussed in the section below.

B.   <u>Examiner's Assertions</u>

The Examiner's rejection of dependent claims 20, 26, 28, and 29 as anticipated by King relies on assertions that are not supported by the teaching in King, for the reasons discussed below.

1. The Examiner asserts that "As to Claim 20, the light source includes a bright field/dark field lens (see Col. 9, line 31 and Col. 15, line 5)."

Applicants' response: There is no teaching in the King *et al.* reference that the lenses referred to could be bright field/dark field lenses. In fact, in the King *et al.* apparatus the lens would necessarily not be a bright field/dark field lens. This is so because King *et al.* uses a lens as part of a standing wave optical resonator device, which provides a useful way of increasing evanescent excitation of the light-scattering entity. In King *et al.*, this use of a lens is helpful because their apparatus relies solely on total internal reflection (TIR) for evanescent wave excitation.

Bright field/dark field illumination is an alternative method to TIR evanescent wave excitation for illuminating the light-scattering entities. Thus, since King *et al.* rely solely on TIR for illumination of the light-scattering entities, the King *et al.* apparatus' lens would necessarily not be a bright field/dark field lens.

2. The Examiner asserts that "As to claim 26, the image processor operates to construct an image of PRE ... peak intensity (see Col. 4, lines 52-55 and Col. 5, lines 53-60, and Col. 6, lines 13-15)." (Office Action, page 5)

Applicants' response: There is no teaching in King *et al.* of an image processor that is capable of constructing an image of PRE peak intensity. The King *et al.* apparatus is not capable of constructing the spectral emission curve of PRE emission intensity vs. illuminating wavelength, as shown in Figs. 1 and 2 of Applicant's specification. To construct this spectral emission curve, the light source would be required to illuminate the PREs over a continuous range of frequencies. King *et al.*, at best, can illuminate only at a discrete number of wavelengths, and would be unable to establish the wavelength at which the peak intensity is achieved.

3. The Examiner asserts that "As to claim 28, the discriminator means includes means for discriminating PREs based on detected values of peak intensity (see column

4, lines 40-42, column 4, line 66 – column 5, line 4, and column 6, line 62 – column 7, line 8)." (Office Action, page 5)

Applicants' response: Contrary to the Examiner's assertion, there is no teaching in King *et al.* of an image processor that is capable of constructing an image of PRE peak intensity. The portions of the King *et al.* reference that the Examiner cites specifically state that the optical signal detected indicates only the "presence or absence" (Col. 4, line 38) of a target (Col. 5, line 3 refers to determining the "presence" of the target substance, Col. 7, line 5 refers to the "light and dark" pattern detected). Thus the King *et al.* reference includes no teaching of discriminating PREs based on this characteristic.

4. The Examiner asserts that "As to claim 29, the discriminating means discriminates for a selected type of PRE, or those PREs which are interacting with one another and those which are not (see column 4, lines 40-42, column 4, line 66 – column 5, line 4, and column 6, line 62 – column 7, line 8)."

Applicants' response: The King *et al.* apparatus teaches only to look for the "presence" of an entity (see Col. 4, lines 40-42, Col. 4, line 66 – Col. 5, line 4), and is unable to discriminate for a selected type of PRE, or those PREs which are interacting with one another and those which are not. King *et al.*, in Col. 7, line 5, states clearly that the apparatus is only concerned with determining the presence or absence of entities ("the resulting checkerboard (i.e., light and dark) fluorescence pattern is detected"). Thus the King *et al.* reference includes no teaching of discriminating PREs based on this characteristic.
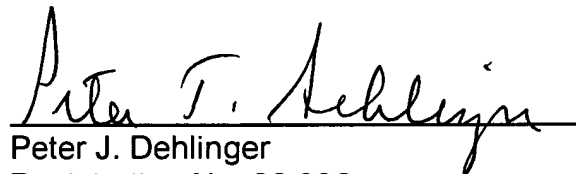
II.   Conclusions

In view of the foregoing, the applicant submits that the claims 19-26, 28 and 29 now pending in the application patentably define over the prior art. A Notice of Allowance is therefore respectfully requested.

If in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is encouraged to call the undersigned at (650) 838-4401.

Respectfully submitted,

Date:_____

Peter J. Dehlinger
Registration No. 28,006

Correspondence Address:
Customer No. 22918
Perkins Coie LLP
P.O. Box 2168
Menlo Park, California 94026
(650) 838-4300